REMARKS

This is in full and timely response to the Office Action mailed March 19, 2003, submitted concurrently with a Petition for Extension of Time to within the second extended month. Reexamination and reconsideration in light of the above amendments and the following remarks is respectfully requested.

By the foregoing amendment, claims 1-5 and 10-15 were cancelled without prejudice or disclaimer to their underlying subject matter, claim 7 was amended, and claims 20-23 were added. Claim 7 was amended to incorporate the elements of claim 10. Support for this amendment can be found variously throughout the specification, including for example, original claim 10. Support for new claim 20 can be found variously throughout the specification, including for example, claim 11. Support for new claim 21 can be found variously throughout the specification, including for example, claim 15. Support for new claim 22 can be found variously throughout the specification, including for example, original claim 1. Support for new claim 23 can be found variously throughout the specification, including for example, original claim 5. No new matter was added. Claims 7-9 and 16-23 are currently pending for the Examiner's reconsideration, with claims 7 and 16 being independent.

Rejections under 35 U.S.C. §102

Claim 1 was are rejected under 35 U.S.C. §102(a) as being anticipated by U.S. Patent No. 6,153,295 to Nishizawa et al. Applicant respectfully traverses this rejection.

However, in order to expedite prosecution, and while not acknowledging the propriety of the rejection, Applicant has cancelled claim 1 without prejudice or disclaimer, mooting this rejection. Withdrawal of this rejection is respectfully requested.

Rejections under 35 U.S.C. §103

Claims 2-5 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,153,295 to Nishizawa et al. Applicant respectfully traverses this rejection.

However, in order to expedite prosecution, and while not acknowledging the propriety of the rejection, Applicant has cancelled claims 2-5 without prejudice or disclaimer, mooting this rejection. Withdrawal of this rejection is respectfully requested.

Claims 7-19 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,153,295 to Nishizawa et al. in view of U.S. Patent No.5,433,973 to Wallack et al. Applicant respectfully traverses this rejection.

Claim 7 recites a process for producing a magnetic recording medium which comprises: applying a non-magnetic layer coating material onto a non-magnetic support; drying the coating material to form a non-magnetic layer; curing the non-magnetic layer after drying the non-magnetic layer coating material; dispersing a magnetic layer coating material again by means of an online dispersion apparatus; and immediately applying the magnetic layer coating material more excessively than an intended magnetic layer-wet thickness onto the non-magnetic layer by using a die nozzle coating followed by scraping excess amounts of the magnetic layer coating material to the intended magnetic layer-wet thickness by means of a bar to form a magnetic coating layer.

Claim 16 recites a process for producing a magnetic recording medium, which comprises: applying a non-magnetic layer coating material onto a non-magnetic support; drying the coating material to form a non-magnetic layer; radiation-curing the non-magnetic layer after drying the non-magnetic layer coating material; and applying a magnetic layer coating material more excessively than an intended magnetic layer-wet thickness onto the non-magnetic layer by using a die nozzle coating followed by scraping excess amounts of the magnetic layer coating material to the intended magnetic layer-wet thickness by means of a bar to form a magnetic coating layer.

Nishizawa et al. '295 discloses a method of making a magnetic recording medium comprising applying an undercoating on a substrate, drying and curing the undercoating and applying a magnetic coating to the undercoating. As acknowledged in the Office Action, Nishizawa et al. '295 fail to explicitly disclose, teach or suggest radiation curing.

Wallack et al. '973 teach radiation curing a coating after it has been dried, however this curing process is only performed on a "backside or magnetic side dispersion" (col. 5, lines 40-65). In contrast, claim 16 of the present application clearly requires the radiation curing be performed on the non-magnetic layer, disposed between the magnetic layer and non-magnetic support, and claim 7 clearly requires that the curing be performed on the non-magnetic layer, disposed between the magnetic layer and non-magnetic support, . While Wallack et al. '973 states that the pigment used in the coating material to be radiation-cured "can be either magnetic or non-magnetic" (col. 4, lines 26-36), further inspection reveals the non-magnetic pigment

described here is only for use in the backside coating, which is applied on the opposite surface of the substrate as that of the magnetic layer. (col. 5, lines 40-54). Clearly, the chemical properties, dimensions and weight requirements of the back-coat layer and non-magnetic underlayer widely differ (pages 6-16 and 20-22), as do their objectives (pages 5 and 20). Therefore, because Wallack et al. '973 fail to disclose, teach or suggest radiation curing or curing of a "non-magnetic layer" disposed between the magnetic layer and the non-magnetic support as is claim in the present application, the Examiner has failed to make a *prima facie* case of obviousness with respect to claims 7 and 16.

As amended, claim 7 was combined with the elements of claim 4. Accordingly, in order to advance prosecution, as the examiner previously rejected claim 4 as alleging that the "limitations of these dependent claims are conventional and do not render these claims obvious. See Morishita et al...," Applicant will address the elements of claim 4 combined with claim 7.

The process described in U.S. Patent No. 5,382,687 to Morishita et al. (Morishita et al. '687) relates to a technology group entirely different from that in the present application. As such, Morishita et al. '687 fail to appreciate the importance of producing a magnetic recording medium possessing the requisite electromagnetic characteristics necessary for effective magnetic recording mediums. The process disclosed in Morishita et al. '687 is concerned solely with the achievement of "electrophotographic properties" (col. 1, lines 13-31), not electromagnetic characteristics. As stated on page 2 of the specification, one of the primary goals of the present invention is achieving a magnetic layer having a sufficient sensitivity suited for use in an MR head. In order to be suited for use by an MR head, various electromagnetic characteristics must be attained, such as, for example, a S/N ratio of 20 dB or greater (page 36), a magnetic layer consisting of at least 50% magnetic powder (page 17) or a surface roughness of 5nm or less (page 20). Morishita et al. '687 fail to disclose, teach or suggest fulfilling any of these electromagnetic requirements because it is concerned solely with electrophotographic properties. There is therefore no guarantee or certainty that the product produced in Morishita et al. '687 would attain the electromagnetic characteristics necessary for suitable use in an MR head. Consequently, one skilled in the art would lack the requisite motivation to combine the teachings of Morishita et al. '687 with Nishizawa et al. '295 in order to reach the claims of the present application.

As described in the present application, because the magnetic coating tends to form an extremely dilute solution, flocculation, or lumping of the coating, tends to occur. This flocculation may be prevented by dispersing the magnetic coating again by online dispersion immediately before applying the coating material onto the non-magnetic layer. See page 24. More specifically, it is suggested an ultrasonic dispersion apparatus is preferably used for this process. Morishita et al. '687, however, fail to appreciate the problem of flocculation, nor does it suggest that by subjecting the coating to an additional online dispersion process the problem will be remedied. The above discussions regarding the divergent technologies of the present invention and Morishita et al. '687 clearly show why a person of ordinary skill in the art would not reach the invention of claim 4 by combining the teachings of Morishita et al. '687 and Nishizawa et al. '295, or Morishita et al. '687, Nishizawa et al. '295 and Wallack et al. '973.

Moreover, the charge generation layer cited in Morishita et al. '687 is a photoconductive layer, not a magnetic layer. The magnetic layer of the present invention consists of at least 50% by weight of magnetic powder, and more preferably 55 to 75%. See page 17. The charge generation layer described in Morishita et al. '687, however, fail to disclose, teach or suggest the use of any amount of magnetic powder at all. As described in column 26, lines 53-68, the charge generation material of Morishita et al. '687 consists of various metals, non-metals or pigments; none of which disclose or suggest the use of any kind of magnetic powder. Thus, Morishita et al. '687 fail to teach a magnetic recording medium "wherein 2 to 20 times as large amounts of the magnetic layer coating material as the intended magnetic layer-wet thickness is applied" (claims 8, 17), nor of a process "wherein a solid component concentration of the magnetic layer coating material is 10% by weight or less" (claim 9, 18), nor of a "magnetic layer with a dry thickness of 0.02 to 0.08 μm" (claims 21, 23), because the limitations disclosed in Morishita et al. '687 relate to a photoconductive, not a magnetic layer. Consequently, a rejection of claims 8, 9, 17, 18, 21 or 23 would fail to meet a *prima facie* test of obviousness.

Accordingly, a prima facie case of obvious has not been and cannot be established. For at least the reasons above, claims 7 and 16 are therefore patentable, and withdrawal of the §103(a) rejection is therefore respectfully solicited.

Claims 8. 9, 22 and 23, being dependent upon claim 7, and claims 17-21, being dependent upon claim 16, are also allowable for the reasons above. Moreover, these claims are further distinguished by the materials recited therein, particularly within the claimed combination. Withdrawal of the §103(a) rejection is therefore respectfully solicited.

Conclusion

For the foregoing reasons, claims 7-23 are allowable, and the present application is in condition for allowance. Accordingly, favorable reexamination and reconsideration of the application in light of these amendments and remarks is courteously solicited. If the examiner has any comments or suggestions that would place this application in even better form, the Examiner is requested to telephone the undersigned attorney at the number below.

Dated: August 19, 2003

Respectfully submitted,

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